

**ABSTRACT**

A system for determining characteristics associated with a communication channel includes a transmitter for transmitting a first signal via the communication channel. The system includes a receiver for receiving a second signal via the communication channel in response to the first signal. The second signal is associated with the first signal. The system includes a correlator for performing frequency domain correlation between a frequency domain representation of the second signal and frequency domain representations of a plurality of time-delayed versions of the first signal to generate frequency domain correlation information. The system includes an analyzer for identifying correlation peaks in a magnitude of the frequency domain correlation information to determine locations of discontinuities of the communication channel. The identified correlation peaks are associated with the locations of the discontinuities of the communication channel.